

In the claims:

Claims 1 – 22 (Canceled)

23. (Currently amended) A nucleic acid molecule comprising a nucleotide sequence encoding ~~two~~ urease X and urease Y subunit polypeptides of a urease complex ~~such as expressed by~~ *Helicobacter felis*, said nucleotide sequence having at least 85% homology with SEQ ID NO: 1 or a part thereof encoding at least an immunogenic fragment of one of said subunits, said part having a length of at least ~~40~~ 70 nucleotides.

Claims 24 – 25 (Canceled)

26. (Original) The nucleic acid molecule of claim 23, which encodes one or both of the urease X subunit polypeptide and urease Y subunit polypeptide.

27. (Canceled)

28. (Currently amended) The nucleic acid molecule of claim ~~27~~ 23, wherein the nucleotide sequence has at least 94% homology with SEQ ID No: 1.

29. (Canceled)

30. (Currently amended) ~~A~~ An isolated and purified DNA fragment comprising a nucleotide sequence according to claim 23.

31. (Original) A recombinant DNA molecule comprising a nucleotide sequence according to Claim 23 under the control of a functionally linked promoter.

32. (Original) A live recombinant carrier comprising a recombinant DNA molecule of claim 31.

33. (Original) A host cell comprising a nucleic acid molecule of claim 23, a DNA fragment of claim 30, a recombinant DNA molecule of claim 31 or a live recombinant carrier of claim 32.

34. (Currently amended) An isolated *Helicobacter felis* urease X subunit polypeptide, said polypeptide comprising an amino acid sequence that is at least 85% homologous to SEQ ID NO: 2, or an immunogenic fragment of said polypeptide having a length of at least 40 70 amino acids, wherein said immunogenic fragment induces an immune response against an urease X subunit in ureaseXY.

Claims 35 - 36 (Canceled)

37. (Currently amended) The polypeptide of claim 34, wherein said amino acid sequence is at least 90% homologous to SEQ ID NO: 2, or an immunogenic fragment of said polypeptide which induces an immune response against an urease X subunit in ureaseXY.

38. (Currently Amended) The polypeptide of claim 37, wherein said amino acid sequence is at least 94% homologous to SEQ ID NO: 2, or an immunogenic fragment of said polypeptide which induces an immune response against an urease X subunit in ureaseXY.

39. (Currently amended) The polypeptide of claim 31, wherein said amino acid sequence is at least 97% homologous to SEQ ID NO: 2, or an immunogenic fragment of said polypeptide which induces an immune response against an urease X subunit in ureaseXY.

40. (Currently amended) An isolated *Helicobacter felis* urease Y subunit polypeptide, said polypeptide comprising an amino acid sequence that is at least 85% homologous to SEQ ID NO: 3, or an immunogenic fragment of said polypeptide having a length of at least 40 ~~70~~ amino acids, wherein said immunogenic fragment induces an immune response against an urease Y subunit in ureaseXY.

Claims 41 – 43 (Canceled)

44. (Currently amended) The polypeptide of claim 43, 40, wherein said amino acid sequence is at least 94% homologous to SEQ ID NO: 3, or an immunogenic fragment of said polypeptide, which induces an immune response against an urease Y subunit in ureaseXY.

45. (Canceled)

46. (Currently amended) ~~A vaccine for combating *Helicobacter felis* infections, An~~ immunogenic composition comprising an immunogenically effective amount of a nucleic acid molecule of claim 23, ~~a DNA fragment of claim 30, a recombinant DNA molecule of claim 31, a~~ live recombinant carrier of claim 32, a host cell of claim 33 or a polypeptide according to claim 34 or 40, and a pharmaceutically acceptable carrier.

47. (Currently amended) The ~~vaccine~~ immunogenic composition of claim 46, further comprising an adjuvant.

48. (Currently amended) The ~~vaccine~~ immunogenic composition of claim 46, further comprising an additional antigen derived from a virus or microorganism which is pathogenic to mammals.

49. (Currently amended) The vaccine immunogenic composition of claim 48, wherein said virus or microorganism pathogenic to mammals is selected from the group consisting of Feline Infectious Peritonitis virus, Feline Immune deficiency virus, Canine ~~and~~ Parvovirus, Feline Parvovirus, Distemper virus, Adenovirus, Calicivirus, *Bordetella bronchiseptica*, *Borrelia burgdorferi*, *Leptospira interrogans*, *Chlamydia* and *Bartonella henseli*.

50. (Currently amended) A vaccine An immunogenic composition for combating *Helicobacter felis* infections, comprising antibodies against a polypeptide of claims 34 or 40.

51. (Canceled)

52. (Currently amended) A ~~diagnostic test~~ method for the detection of *Helicobacter felis* specific DNA in a specimen, comprising ~~a~~ contacting the specimen with the nucleic acid molecule of claim 23, or a fragment thereof, having a detectable label and detecting any labeled nucleic acid bound to the specimen.

53. (Currently amended) A ~~diagnostic test~~ method for the detection of antibodies against *Helicobacter felis* in a specimen, comprising contacting the specimen with a polypeptide, or a fragment thereof, according to claims 34 or 40 claim 34 having a detectable label and detecting any labeled polypeptide bound to the specimen.

54. (Currently amended) A ~~diagnostic test~~ method for the detection of antigenic matter of *Helicobacter felis* in a specimen, comprising antibodies contacting an antibody having a detectable label against a polypeptide, or a fragment thereof, according to ~~claims 34 or 40~~ claim 34 with the specimen and detecting any labeled antibody bound to the specimen.

55. (New) A method for the detection of antibodies against *Helicobacter felis* in a specimen, comprising contacting the specimen with a polypeptide, or a fragment thereof, according to claim 40 having a detectable label and detecting any labeled polypeptide bound to the specimen.

56. (New) A method for the detection of antigenic matter of *Helicobacter felis* in a specimen, comprising contacting an antibody having a detectable label against a polypeptide, or a fragment thereof, according to claim 40 with the specimen and detecting any labeled antibody bound to the specimen.

57. (New) An immunogenic composition, comprising an immunogenically effective amount of a polypeptide according to Claim 34 and a pharmaceutically acceptable carrier.

58. (New) An immunogenic composition, comprising an immunogenically effective amount of a polypeptide according to claim 40 and pharmaceutically acceptable carrier.